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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/556,340

07/28/2006

Markus Bill

49801

6519

1609 7590 04/13/2009

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EXAMINER

BASKIN, JEREMY S

ART UNIT

PAPER NUMBER

3753

MAIL DATE

DELIVERY MODE

04/13/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/556,340	<b>Applicant(s)</b> BILL ET AL.	
	<b>Examiner</b> Jeremy S. Baskin	<b>Art Unit</b> 3753	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 September 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 November 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>11/10/2005</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Specification***

1. The specification is objected to because the text of the specification sections should be preceded by a section heading as defined by 37 CFR 1.77(b) in uppercase and without underlining or bold type.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Claim 9 provides for the use of a valve in conjunction with a pressure compensator to meter fluid flow, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

### ***Claim Rejections - 35 USC § 101***

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

6. Claim 9 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex*

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*parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1, 2, 4-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Kolchinsky (5,072,752).

9. In regard to Claims 1 and 2, Kolchinsky teaches a proportional valve 20 having a housing 22, three fluid ports 34, 38, 102, a main piston 40, and a pilot piston 76. A solenoid coil 122 actuates the pilot piston which controls the main piston via fluidic pressure and compression spring 66. When a pilot control 82 of the pilot piston is opened off of its corresponding seat 70, fluid flows through constriction channel 44 into a pilot chamber 72 where it is drained out of the third port 102. The resulting pressure drop causes the main piston to actuate the two fluid ports 34, 38 in terms of the amount of fluid pressure present at port 38 (cols. 5-6, lines 55-13).

10. In regard to Claim 4, a selector valve 62 is housed within the main piston 40 and possesses a cross-sectional constriction 56.

11. In regard to Claim 5, the magnet means, or solenoid, has an armature 84, a coil 122, and a pole tube 124. The armature reciprocates in and out of the pole tube when the solenoid is supplied with current with the use of compression springs 66, 92.

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12. In regard to Claims 6 and 7, the pilot control 82 possesses both cylindrical gate 82 and seat (at 100 of member 78 in Figure 2) valve elements by engaging the respective seats of housing member portion 68.

***Claim Rejections - 35 USC § 103***

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kolchinsky in view of Katz et al. (3,667,722).

15. Kolchinsky teaches where the compression spring 66 engages a recess 64 of the main piston 40 where a cross-sectional constriction 56 discharges fluid and where the free end of the compression spring engages a contact piece 70 which is connected to the pilot piston 76. Kolchinsky fails to teach where the contact piece is connected to the pilot piston by way of a contact ball.

16. Katz discloses an electromagnetic proportional valve. In Figure 2, Katz teaches where a compression spring 72 engages a contact piece 68 which is connected to a pilot piston 74 by way of a contact ball 62.

17. At the time of the invention, it would have been obvious to one of ordinary skill in the art to include in Kolchinsky a contact ball in between a contact piece and a pilot piston, as taught by Katz, so as to minimize pilot valve contact surface area while maintaining a hydrodynamic surface.

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18. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kolchinsky in view of Kramer (4,799,645).

19. Kolchinsky fails to teach where a sealing system is on the outer circumference of the pilot piston.

20. Kramer discloses an electromagnetic pilot operated hydraulic valve. Kramer teaches where seals (below 74), are disposed on the outer circumference of the pilot piston 60, 74.

21. At the time of the invention, it would have been obvious to one of ordinary skill in the art to incorporate in Kolchinsky seals around the outer circumference of a pilot piston, as taught by Kramer, so as to prevent undesired flow of fluid to portions of the solenoid valve.

22. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kolchinsky in view of Wilke et al. (6,073,652).

23. Kolchinsky fails to teach where the valve is used in conjunction with a known pressure compensator as an adjustable metering orifice.

24. Wilke discloses a pilot operated solenoid valve. Wilke teaches a pressure compensator 60 in conjunction with the supply valve 10.

25. At the time of the invention, it would have been obvious to one of ordinary skill in the art to incorporate in Kolchinsky a pressure compensator in conjunction with the main valve, as taught by Wilke, so as to provide the greatest pressure to a control input from multiple pressure workports.

### ***Conclusion***

26. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Barber et al. (6,689,060) teaches a proportional valve with multiple ports and

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compression spring. LaMarca (4,921,208) teaches a proportional valve with a seal system and contact ball. Obersteiner (6,435,210) teaches a solenoid valve with multiple ports, cross-sectional constrictions, and a contact ball.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeremy S. Baskin whose telephone number is (571) 270-7421. The examiner can normally be reached on Monday through Friday, 7:30AM to 5:00PM ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Huson can be reached on (571) 272-4887. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/John Rivell/  
Primary Examiner, Art Unit 3753

/J. S. B./

Examiner, Art Unit 3753